

11023

Access DB# 68601

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: ABRAHAM BANTHA Examiner #: 70178 Date: 06/11/02
 Art Unit: 1775 Phone Number 308 4412 Serial Number: 09781-778
 Mail Box and Bldg/Room Location: CP3 11th floor Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Synthetic grass structure, (corresponding particulate material)
 Inventors (please provide full names): same as the particulate material

Fernando Stroppiana
 Earliest Priority Filing Date: 02/16/01 PC Pub 2001/0046589

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please see attached claims -
 Synthetic grass with an infill material
 of polyolefin based materials and
 Vinyl-polymers -
 polyethylene

STAFF USE ONLY

Type of Search

Vendors and cost where applicable

Searcher: JC NA Sequence (#) _____ STN _____
 Searcher Phone #: _____ AA Sequence (#) _____ Dialog ☒
 Searcher Location: _____ Structure (#) _____ Questel/Orbit
 Date Searcher Picked Up: 6/24/02 Bibliographic ☒ **EST AVAILABLE COPY**
 Date Completed: 6/27/02 Litigation _____ Lexis/Nexis _____
 Searcher Prep & Review Time: 2 hrs Fulltext _____ Sequence Systems _____
 Clerical Prep Time: _____ Patent Family _____ WWW/Internet _____
 Online Time: 2 hrs Other _____ Other (specify) _____

Abraham,

I am very sorry your search took so long. We have had a huge backlog in the EIC because of the end of the quarter. Normally a search should be finished within one week.

I am including the Derwent record for your application by Stroppiana. I wanted to mention that if you need to find art very quickly on something like this, you can use Derwent Manual codes ("CPI-CODES:" on the handout - the C stands for chemical codes - they are located on the last page of the Derwent printout.

On West you can find out what a specific CPI code or manual code means. On the Main page they have a link to Derwent manuals.

The first A in the code for example, means that it is a polymer. The first 2 codes in the list in the Derwent record A04-G01E and A04A-H00H refer to types of polymers. The other 2 codes beginning with A12- mean sports and the last one means powders/granules.

*You can AND together
Codes or combine
with search terms*

To search on a code in East/West: search A04-G01E.cpi.
You can also use use truncation such as A04-G\$ or A04-\$ etc.

Derwent has a lot of good information on patents like this one.

Again sorry for the delay.

John

? show file
File 8: Ei Compendex(R) 1970-2002/Jun W4
(c) 2002 Engineering Info. Inc.
File 323: RAPRA Rubber & Plastics 1972-2002/Aug
(c) 2002 RAPRA Technology Ltd
File 351: Derwent WPI 1963-2002/UD,UM &UP=200240
(c) 2002 Thomson Derwent
File 322: Polymer Online
(c) 1990 John Wiley & Sons Inc.
File 34: SciSearch(R) Cited Ref Sci 1990-2002/Jun W5
(c) 2002 Inst for Sci Info
File 35: Dissertation Abs Online 1861-2002/May
(c) 2002 ProQuest Info&Learning
File 399: CA SEARCH(R) 1967-2002/UD=13626
(c) 2002 AMERICAN CHEMICAL SOCIETY
File 347: JAPIO Oct 1976-2002/Feb(Updated 020604)
(c) 2002 JPO & JAPIO
File 94: JICST-EPlus 1985-2002/May W1
(c) 2002 Japan Science and Tech Corp(JST)
? ds

Set	Items	Description
S1	7469	(ARTIFICIAL? OR SYNTHETIC?) (2N) (GRASS? OR TURF? OR COVER?)
S2	1327887	POLYOLEFIN? OR OLEFIN? OR PVC OR VINYL(3N)POLYMER? OR POLY-ETHYLENE? OR POLYVINYL(2N)CHLORIDE?
S3	3282997	PARTICL? OR PARTICULAT? OR GRIT? OR GRAIN? ? OR GRANUL? OR POWDER? OR FLAKE? ? OR PELLET?

S4 3024 INFILL? ?
 S5 141131 S2 AND S3
 S6 108 S5 AND S1
 S7 7 S6 AND S4
 S8 143978 SPORTS?
 S9 14 S6 AND S8
 S10 318693 GAME? OR SPORT? OR RECREATION?
 S11 17 S6 AND S10
 S12 22 S7 OR S9 OR S11
 S13 2336 (ARTIFICIAL? OR SYNTHETIC?) (2N) (GRASS? OR TURF? OR COVER?)-
 /TI
 S14 40 S13 AND S5
 S15 40661 S2(5N)S3
 S16 14 S13 AND S15
 S17 2 S16 AND S4
 S18 54361 S2(10N)S3
 S19 19 S13 AND S18
 S20 2 S19 AND S4
 S21 7 S7 OR S17 OR S20
 S22 17 S19 NOT S21
 S23 15 (S9 OR S11) NOT S22

? t s21/7,de/1-7

21/7,DE/1 (Item 1 from file: 351)
 DIALOG(R)File 351:Derwent WPI
 (c) 2002 Thomson Derwent. All rts. reserv.

014494581

WPI Acc No: 2002-315284/200235

Underlay for synthetic grass layer used as playing surface, comprises
 resilient layer with upper surface having indentations partially filled
 with particulate filler

Patent Assignee: PROFESSIONAL GOLF SOLUTIONS PTY LTD (PROF-N)

Inventor: BALDERSON C E; SCHAUMBERG K J; WARWICK B R

Number of Countries: 096 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200209825	A1	20020207	WO 2001AU939	A	20010801	200235 B
AU 200177392	A	20020213	AU 200177392	A	20010801	200238

Priority Applications (No Type Date): AU 20009144 A 20000802

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200209825	A1	E	19	A63B-069/36	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
 CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
 IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
 PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
 IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200177392 A A63B-069/36 Based on patent WO 200209825

Abstract (Basic): WO 200209825 A1

Abstract (Basic):

NOVELTY - An underlay (12) comprises a resilient layer comprising
 an upper surface formed with indentations, and particulate filler for

the indentations.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(A) a synthetic playing surface comprising the underlay and an upper layer of a synthetic grass; and

(B) a method of constructing a synthetic playing surface (11) comprising providing a base layer (14), forming the above-mentioned underlay, laying a synthetic grass over the underlay, and placing a particulate infill on the grass layer.

USE - For synthetic grass layer used as synthetic playing surface (claimed), or grass carpet for golf green.

ADVANTAGE - The invention provides synthetic grass layer with improved performance and that holds larger amount of infill than conventional grass surfaces. It provides golf green that can emulate a natural grass green both when a ball is chipped to the green and during putting. The presence of the particulate filler in the convolutions provides dampening effect between the grass and the underlay, while providing rigidity for the ball to roll in a natural manner after final bounce. The surface thus produce has desirable energy absorbing properties.

DESCRIPTION OF DRAWING(S) - The figure is a sectional view of a synthetic grass surface.

Playing surface (11)

Underlay (12)

Dressing layer (13)

Base layer (14)

Convolutions (15)

Backing layer (16)

Pile elements (17)

Silica (20)

pp; 19 DwgNo 1/1

Title Terms: UNDERLAY; SYNTHETIC; GRASS; LAYER; PLAY; SURFACE; COMPRISE;

RESILIENT; LAYER; UPPER; SURFACE; INDENT; FILLED; PARTICLE; FILL

Derwent Class: A86; P36; Q41

International Patent Class (Main): A63B-069/36

International Patent Class (Additional): A63C-019/04; E01C-013/08

21/7,DE/2 (Item 2 from file: 351)

DIALOG(R)File 351:Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

014367648

WPI Acc No: 2002-188350/200224

Synthetic grass assembly for installation on supporting substrates, includes pile fabric with sheet backing and synthetic ribbons, infill layer of particulate material, and top course exclusive of resilient granules

Patent Assignee: FIELDTURF HOLDINGS INC (FIEL-N)

Inventor: PREVOST J

Number of Countries: 096 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200198589	A2	20011227	WO 2001CA922	A	20010621	200224 B
AU 200167237	A	20020102	AU 200167237	A	20010621	200230

Priority Applications (No Type Date): US 2000598149 A 20000621

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200198589 A2 E 34 E01C-013/08

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA

CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
 IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
 PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
 Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
 IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
 AU 200167237 A E01C-013/08 Based on patent WO 200198589

Abstract (Basic): WO 200198589 A2

Abstract (Basic):

NOVELTY - A synthetic grass assembly comprises a pile fabric with a flexible sheet backing and upstanding synthetic ribbons. An infill layer of particulate material is disposed between the ribbons. The infill layer comprises a bottom course of intermixed hard and resilient granules. A top course is exclusive of resilient granules disposed on the bottom course.

DETAILED DESCRIPTION - A synthetic grass assembly for installation on a supporting substrate, comprises a pile fabric with a flexible sheet backing (1) and upstanding synthetic ribbons (2) of a selected length. The ribbons extend upwardly from an upper surface of the backing. An infill layer (3) of particulate material is disposed interstitially between the upstanding ribbons on the backing, and a depth of less than the length of the ribbons. The particulate material is hard, or resilient granules. The infill layer comprises a bottom course (5) of intermixed hard and resilient granules of identical size distribution, disposed on the backing. A top course (6) is exclusive of resilient granules disposed on the bottom course. An upper portion (7) of the synthetic ribbons extend upwardly from the surface of the top course.

USE - The assembly is useful for installation on supporting soil substrates, e.g. athletic playing field. It is also used in any area suitable for grass cover such as high traffic landscape areas, road and highway medians, indoor gardens or golf greens, and equestrian surfaces.

ADVANTAGE - The synthetic assembly retain its properties throughout use without substantial segregation or compaction of the infill, and with reduced requirement for periodic brushing of the surface. It enhances the resilience and reduces the abrasive nature of conventional granular infills filling the interstices of the synthetic grass ribbons while enabling the cleats of athletic shoes to properly release without risk of injury.

DESCRIPTION OF DRAWING(S) - The figure shows a cross-section through the synthetic grass assembly.

Flexible sheet backing (1)
 Synthetic ribbons (2)
 Infill layer (3)
 Bottom course (5)
 Top course (6)
 Upper portion (7)
 pp; 34 DwgNo 1/6

Title Terms: SYNTHETIC; GRASS; ASSEMBLY; INSTALLATION; SUPPORT; SUBSTRATE;
 PILE; FABRIC; SHEET; BACKING; SYNTHETIC; RIBBON; INFILL; LAYER; PARTICLE;
 MATERIAL; TOP; COURSE; EXCLUDE; RESILIENT; GRANULE
 Derwent Class: A84; Q41
 International Patent Class (Main): E01C-013/08

21/7,DE/3 (Item 3 from file: 351)
 DIALOG(R)File 351:Derwent WPI
 (c) 2002 Thomson Derwent. All rts. reserv.

014303438

WPI Acc No: 2002-124141/200217

Synthetic-grass cover structure for, i.e. sport facilities, includes particulate infill consisting of homogeneous mass of granular material as polyolefin or vinyl-polymer based materials

Patent Assignee: MONDO SPA (MOND-N); STROPPIANA F (STRO-I)

Inventor: STROPPIANA F

Number of Countries: 028 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1158099	A2	20011128	EP 2001830092	A	20010213	200217 B
CA 2335716	A1	20011125	CA 2335716	A	20010213	200217
US 20010046589	A1	20011129	US 2001785778	A	20010216	200217

Priority Applications (No Type Date): IT 2000TO476 A 20000525

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1158099	A2	E	5	E01C-013/08	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI TR

CA 2335716 A1 E E01C-013/08

US 20010046589 A1 B32B-003/02

Abstract (Basic): EP 1158099 A2

Abstract (Basic):

NOVELTY - A synthetic-grass cover structure includes a particulate infill consisting of homogeneous mass of granular material that can be polyolefin-based materials or vinyl-polymer-based materials.

DETAILED DESCRIPTION - A synthetic-grass cover structure comprises:

(1) a sheet substrate (1) with filiform formations (2) that extend from the substrate to simulate natural grass cover; and
(2) a particulate filling material or infill (3) dispersed between the formations in such a way as to maintain the formation in an upright condition.

The particulate infill consists of homogeneous mass of granular material that can be polyolefin-based materials or vinyl-polymer-based materials.

USE - Used as alternative to natural grass for, i.e. sports facilities.

ADVANTAGE - The particulate infill of the invention is uniformly dispersed on top of the substrate, without giving rise to superimposed layers having different characteristics. The synthetic grass presents characteristics of tread and response to mechanical stress which is similar to that of a natural grass. Any falls that may occur on the synthetic grass does not give rise to undesired effects, e.g. bruises or scratches. Undesired wear of the filiform formations by the infill is avoided. The synthetic grass has excellent characteristics as regards to disposal of rain water, and the infill can also be reused and recycled.

DESCRIPTION OF DRAWING(S) - The figure shows

Sheet substrate (1)

Filiform formations (2)

Particulate filling material or infill (3)

pp; 5 DwgNo 1/1

Title Terms: SYNTHETIC; GRASS; COVER; STRUCTURE; SPORTS; FACILITY; PARTICLE
; INFILL; CONSIST; HOMOGENEOUS; MASS; GRANULE; MATERIAL; POLYOLEFIN;
VINYL; POLYMER; BASED; MATERIAL

Derwent Class: A14; A17; A35; A86; P73; Q41

International Patent Class (Main): B32B-003/02; E01C-013/08

21/7,DE/4 (Item 4 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

013913634

WPI Acc No: 2001-397847/200142

Synthetic turf for athletic venues, comprises porous aggregate layer
laminated on sub-surface layer, pile fabric on non-compactable layer, and
infill of resilient particle

Patent Assignee: DALUISE D A (DALU-I)

Inventor: DALUISE D A

Number of Countries: 090 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200137657	A1	20010531	WO 2000US11805	A	20000502	200142 B
AU 200046882	A	20010604	AU 200046882	A	20000502	200153

Priority Applications (No Type Date): US 99449090 A 19991124

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200137657 A1 E 16 A01N-003/00

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN
CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200046882 A A01N-003/00 Based on patent WO 200137657

Abstract (Basic): WO 200137657 A1

Abstract (Basic):

NOVELTY - A synthetic turf (10), comprises a porous aggregate layer
(3) laminated on sub-surface layer; a pile fabric (9) comprising
several pile elements tufted to a woven backing (7), on a
non-compactable layer; and an infill (6) for pile fabric consisting
mainly of resilient particles.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for
forming synthetic turf on sub-surface base.

USE - For athletic venues.

ADVANTAGE - The synthetic turf eliminates the use of sand in the
top layer, hence has reduced abrasiveness and increased resilience. The
turf resists dislocation of top layer due to water accumulation. The
synthetic turf has improved shock resistance due to embedded resilient
particles. The geotextile used for the woven backing is dimensionally
stable, and resists expansion, contraction or wrinkle formation in the
absence of sand infill layer.

DESCRIPTION OF DRAWING(S) - The figure shows the cross-sectional
view of artificial turf.

Porous aggregate layer (3)

Geotextile membrane (4)

Infill layer (6)

Pile fabric (9)

Synthetic turf (10)

pp; 16 DwgNo 1/3

Title Terms: SYNTHETIC; TURF; ATHLETE; COMPRISE; POROUS; AGGREGATE; LAYER;
LAMINATE; SUB; SURFACE; LAYER; PILE; FABRIC; NON; COMPACT; LAYER; INFILL;
RESILIENT; PARTICLE

Derwent Class: A93; F04; P21; P73; Q42

International Patent Class (Main): A01N-003/00

International Patent Class (Additional): A41G-001/00; B32B-003/02;
 B32B-005/16; B32B-033/00; D03D-027/00; D04H-011/00; D05C-017/00;
 E02B-011/00; E02B-013/00

21/7,DE/5 (Item 5 from file: 351)
 DIALOG(R)File 351:Derwent WPI
 (c) 2002 Thomson Derwent. All rts. reserv.

012865250

WPI Acc No: 2000-037083/200003

Synthetic turf for athletic venues e.g. football and soccer fields
 Patent Assignee: SAFTURF INT LTD INC (SAFT-N); SAFTURF INT LTD (SAFT-N)
 Inventor: DALUISE D A; LIOI P R
 Number of Countries: 084 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5976645	A	19991102	US 9888797	A	19980601	200003 B
WO 9962362	A1	19991209	WO 99US127	A	19990106	200005
AU 9920263	A	19991220	AU 9920263	A	19990106	200021

Priority Applications (No Type Date): US 9888797 A 19980601

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5976645	A		6	A41G-001/00	
WO 9962362	A1	E		A41G-001/00	

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU

CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC

LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL

TJ TM TR TT UA UG UZ VN YU ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR

IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9920263	A			A41G-001/00	Based on patent WO 9962362
------------	---	--	--	-------------	----------------------------

Abstract (Basic): US 5976645 A

Abstract (Basic):

NOVELTY - A sub-surface base (2) of graded and compacted earth is covered in turn with a porous aggregate layer (3), a porous geotextile membrane (4), a non-compactable layer of sand (5) and resilient granules (16), a pile fabric (9) secured to a fabric backing (7) of woven and non-woven bound layers and a pile fabric infill (6) of resilient material. A drain line (30) formed of perforated interconnected pipes buried below the pile fabric directs water away from the turf.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of forming a synthetic turf on a sub-surface base.

USE - A synthetic turf for athletic venues, e.g. football, soccer and lacrosse fields, which mimics natural grass turfs while eliminating the high maintenance and poor durability associated with grass surfaces.

ADVANTAGE - Provides reduced abrasiveness and increased resilience compared with conventional synthetic turfs. The particulate rubber infill avoids the use of sand infill in the pile fabric with its associated abrasiveness. Rubber granules embedded in the sub-surface sand layer prevent compaction and maintain drainage efficiency. The geotextile membrane prevents the sand layer intermingling with the aggregate layer also to maintain drainage. The vertical draining system prevents water accumulation on the turf surface and movement of the infill material by inundation. The pile fabric double backing gives sufficient weight and dimensional stability to prevent wrinkling.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-sectional view of the synthetic turf.

Sub-surface base (2)
 Porous aggregate layer (3)
 Geotextile membrane (4)
 Sand layer (5)
 Pile fabric infill (6)
 Fabric backing (7)
 Pile fabric (9)
 Resilient granules (16)
 Drain line. (30)
 pp; 6 DwgNo 1/3

Title Terms: SYNTHETIC; TURF; ATHLETE; FOOTBALL; SOCCER; FIELD

Derwent Class: A93; P21

International Patent Class (Main): A41G-001/00

21/7,DE/6 (Item 6 from file: 351)
 DIALOG(R)File 351:Derwent WPI
 (c) 2002 Thomson Derwent. All rts. reserv.

004404695

WPI Acc No: 1985-231573/198538

Artificial lawn esp. for sports - has sand infill retained by adhesive

Patent Assignee: ADOLFF J F AG (ADOL-N)

Inventor: FRIEDRICH H J

Number of Countries: 016 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 154841	A	19850918	EP 85101743	A	19850216	198538 B
DE 3409361	A	19850919	DE 3409361	A	19840314	198539
GB 2155327	A	19850925	GB 856583	A	19850314	198539
AU 8539248	A	19850919				198545
GB 2155327	B	19851224				198601
CN 8502143	A	19870110				198806
US 4735825	A	19880405	US 8773857	A	19870715	198816
CA 1246109	A	19881206				198902
SU 1433422	A	19881023	SU 3872751	A	19850313	198917
EP 154841	B	19891011				198941
DE 3573627	G	19891116				198947

Priority Applications (No Type Date): DE 3409361 A 19840314

Cited Patents: A3...8652; EP 64140; EP 65622; No-SR.Pub; US 4396653

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 154841	A	G	14		

Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE

EP 154841	B	G
-----------	---	---

Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE

Abstract (Basic): EP 154841 A

An artificial lawn, esp. for sports grounds, has a filling of sand or other granular material between the threads of the nap. This filling is held in place by an adhesive. In particular at least at the surface of the infill the adhesive is of a granular material, pref. sprayed into position. Adhesives may be water-soluble, esp. of cellulose-ether or casein, or may be water-insoluble, esp. of PVC powder PET powder, fibres, synthetic resin dispersions in water or in a solvent.

USE/ADVANTAGE - As a lawn esp. for a sports ground. Improved properties in particular in respect of the weather.

0/1

Abstract (Equivalent): EP 154841 B

Artificial grass, in particular for games and sports sites, between whose pile threads a filling consisting of pourable material, in particular sand, is provided, such that the free ends of the pile threads project beyond the filling characterised in that the filling is secured in relation to the pile threads by means of a water-insoluble particulate bonding agent mixed with the filling material and which is activated by heating. (6pp)

Abstract (Equivalent): GB 2155327 B

An artificial turf, in particular for sports and playing areas, having a filling of a subdivided bulk material, in particular sand, provided between its pile threads so that the free ends of said pile threads project above said filling, characterised in that the filling is fixed in relation to the pile threads by a bonding agent.

Abstract (Equivalent): US 4735825 A

Artificial grass is produced by mixing free-flowing bulk material with bonding agent, distributing the mixt. between the pile threads of a base mat as a filling with the threads projecting above the filling, and curing the bonding agent so that it secures the material to the threads and the prod. can be rolled for transportation and then unrolled without loss of the material.

The bulk material is pref. sand, and the bonding agent may be readily subsequently removable, e.g. cellulose ether or casein derivs., or may be permanent, eg. polyethylene powder with a particulate size of up to 600 micro-m.

ADVANTAGE - Allows complete prepn. to be carried out at the factory, the prod. only requiring to be unrolled and laid. (4pp)5

Title Terms: ARTIFICIAL; LAWN; SPORTS; SAND; INFILL; RETAIN; ADHESIVE

Derwent Class: A93; P21; P27; P36; P42; Q41

International Patent Class (Additional): A41G-001/00; A47G-027/00;

A63C-009/04; A63C-019/04; B05D-001/36; D04B-021/02; D04H-011/00;

E01C-005/20; E01C-013/00

21/7,DE/7 (Item 1 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

(c) 2002 AMERICAN CHEMICAL SOCIETY. All rts. reserv.

134368080 CA: 134(26)368080x PATENT

Vertically draining rubber-filled synthetic turf with reduced abrasiveness and increased resilience comprising pile fabrics and an infill layer comprising rubber particles

INVENTOR(AUTHOR): Daluise, Daniel A.

LOCATION: USA

PATENT: PCT International ; WO 0137657 A1 DATE: 20010531

APPLICATION: WO 2000US11805 (20000502) *US 449090 (19991124)

PAGES: 16 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: A01N-003/00A;
A41G-001/00B; B32B-005/16B; B32B-003/02B; B32B-033/00B; D03D-027/00B;
D04H-011/00B; D05C-017/00B; E02B-011/00B; E02B-013/00B

DESIGNATED COUNTRIES: AE; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH;
CN; CR; CU; CZ; DE; DK; DM; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL;
IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK;
MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT;
TZ; UA; UG; US; UZ; VN; YU; ZA; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

DESIGNATED REGIONAL: GH; GM; KE; LS; MW; SD; SL; SZ; TZ; UG; ZW; AT; BE;
CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF;
CG; CI; CM; GA; GN; GW; ML; MR; NE; SN; TD; TG

SECTION:

CA238003 Plastics Fabrication and Uses

IDENTIFIERS: artificial turf resilient abrasiveness redn, polyethylene fiber artificial turf resilient, butadiene styrene rubber filler artificial turf

DESCRIPTORS:

Turf...

artificial; vertically draining rubber-filled synthetic turf with reduced abrasiveness and increased resilience comprising pile fabrics and an infill layer comprising rubber particles

Polyolefin fibers...

ethylene; vertically draining rubber-filled synthetic turf with reduced abrasiveness and increased resilience comprising pile fabrics and an infill layer comprising rubber particles

Rubber, uses... Styrene-butadiene rubber, uses...

vertically draining rubber-filled synthetic turf with reduced abrasiveness and increased resilience comprising pile fabrics and an infill layer comprising rubber particles

CAS REGISTRY NUMBERS:

9002-88-4 fiber; vertically draining rubber-filled synthetic turf with reduced abrasiveness and increased resilience comprising pile fabrics and an infill layer comprising rubber particles

9003-55-8 styrene-butadiene rubber, vertically draining rubber-filled synthetic turf with reduced abrasiveness and increased resilience comprising pile fabrics and an infill layer comprising rubber particles

? t s22/7,de/1-17

22/7,DE/1 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

014172479

WPI Acc No: 2001-656707/200175

Artificial turf for sports and recreational activities, has backing formed by knitting flat face yarn, textured face yarn, stitch-in yarn, and lay-in yarn, coating coupled to backing, and underlay placed under backing

Patent Assignee: SOUTHWEST RECREATIONAL IND INC (SWRE-N); SEATON R J (SEAT-I)

Inventor: SEATON R J

Number of Countries: 094 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200161110	A1	20010823	WO 2001US4578	A	20010213	200175 B
US 20010033902	A1	20011025	US 2000182300	A	20000214	200175
			US 2001766236	A	20010118	
AU 200138195	A	20010827	AU 200138195	A	20010213	200176

Priority Applications (No Type Date): US 2001766236 A 20010118; US 2000182300 P 20000214

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 200161110	A1	E	25 E01C-013/08	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT

RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
US 20010033902 A1 A41G-001/00 Provisional application US 2000182300

AU 200138195 A E01C-013/08 Based on patent WO 200161110

Abstract (Basic): WO 200161110 A1

Abstract (Basic):

NOVELTY - An artificial turf has a flat face yarn (102); a textured face yarn (104); a backing formed by knitting the flat face yarn, the textured face yarn, a stitch-in yarn (406), and a lay-in yarn (404) so that flat face yarn appears to be longer than textured face yarn; a coating coupled to the backing to prevent detachment of the yarns; an underlay placed under the backing to provide a stable base.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of forming an artificial turf, including extruding a pellet through a spinneret to form an extended ribbon; knitting the extended ribbon into a blend of other ribbon, that has been textured, and stitch-in yarn to form knots; cutting the extended ribbon to form a flat face yarn having a length of approximately 1 inch; forming rows on knots from the extended ribbon, the other ribbon, and the stitch-in yarn; and knitting a lay-in yarn into the rows of knots to combine the rows of knots and form a backing for the turf while the combination also forms a textured zone on top of the backing and the flat face yarn extends upwardly from the textured zone.

USE - The invention is used to provide a synthetic turf playing surface for sports and recreational activities.

ADVANTAGE - The invention eliminates the problems associated with tufting.

DESCRIPTION OF DRAWING(S) - The figure shows a diagram of the backing for the turf.

Flat face yarn (102)

Textured face yarn (104)

Lay-in yarn (404)

Stitch-in yarn (406)

pp; 25 DwgNo 4/7

Title Terms: ARTIFICIAL; TURF; SPORTS; RECREATION; ACTIVE; BACKING; FORMING
; KNIT; FLAT; FACE; YARN; TEXTURE; FACE; YARN; STITCH; YARN; LAY; YARN;
COATING; COUPLE; BACKING; UNDERLAY; PLACE; BACKING

Derwent Class: A93; F04; Q41

International Patent Class (Main): A41G-001/00; E01C-013/08

International Patent Class (Additional): A41G-005/00; B29C-047/00;
B29D-028/00; D04B-021/04

22/7,DE/2 (Item 2 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

013710021

WPI Acc No: 2001-194245/200120

Moisture proof laminate for use in forming printed packaging paper,
comprises water vapor barrier consisting of flat pigment and synthetic
resin and cover layer comprising protruding spacer particle

Patent Assignee: OJI PAPER CO (OJIP)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2000355900	A	20001226	JP 99165475	A	19990611	200120 B

Priority Applications (No Type Date): JP 99165475 A 19990611

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2000355900	A		12	D21H-027/36	

Abstract (Basic): JP 2000355900 A

Abstract (Basic):

NOVELTY - A moisture proof laminate comprises water vapor barrier and cover layer, sequentially provided on a paper support. The barrier consists of flat pigment and synthetic resin and cover layer comprises protruding spacer particle and synthetic resin.

USE - For use in forming printed packaging paper.

ADVANTAGE - The moisture proof laminate is recyclable and has abrasion resistance and uniform glossiness. The laminate is intact as separation of layers is prevented. Breaking of contents wrapped by the damp proof packaging material is restrained.

pp; 12 DwgNo 0/0

Title Terms: MOIST; PROOF; LAMINATE; FORMING; PRINT; PACKAGE; PAPER; COMPRISE; WATER; BARRIER; CONSIST; FLAT; PIGMENT; SYNTHETIC; RESIN; COVER ; LAYER; COMPRISE; PROTRUDE; SPACE; PARTICLE

Derwent Class: A94; F09; P73

International Patent Class (Main): D21H-027/36

International Patent Class (Additional): B32B-027/10; D21H-019/40; D21H-019/58; D21H-019/62; D21H-021/50

22/7, DE/3 (Item 3 from file: 351)

DIALOG(R) File 351: Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

012046445

WPI Acc No: 1998-463355/199840

Sunlight selective absorbing, warmth-retaining fibre having good light weight properties - where component consisting of mixt. of fine Group IV metal carbide particle and thermoplastic synthetic polymer is covered with second component consisting of thermoplastic synthetic polymer, and hollow sections are formed in the fibre

Patent Assignee: UNITIKA LTD (NIRA)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 10195716	A	19980728	JP 96345254	A	19961225	199840 B

Priority Applications (No Type Date): JP 96345254 A 19961225

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10195716	A		6	D01F-008/14	

Abstract (Basic): JP 10195716 A

A sunlight selective absorbing, warmth-retaining fibre is composed of a sheath-core type or C-type composite fibre in which a component A consisting of a mixt. of a fine Group IV metal carbide particle and a thermoplastic synthetic polymer is covered with a component B consisting of a thermoplastic synthetic polymer and hollow sections are formed in the fibre.

Preferably, the thermoplastic synthetic polymer used includes a polyamide polymer e.g. nylon-6, nylon-66, polyester polymer e.g. polyethylene terephthalate and polybutylene terephthalate and polyolefin polymer e.g. polyethylene and polypropylene. The fine

transitional metal carbide particle includes zirconium carbide, hafnium carbide and titanium carbide.

ADVANTAGE - The fibre has good light weight properties and warmth-retaining properties when the sun shines and is in the shade.

Dwg.1/2

Title Terms: SUNLIGHT; SELECT; ABSORB; WARM; RETAIN; FIBRE; LIGHT; WEIGHT; PROPERTIES; COMPONENT; CONSIST; MIXTURE; FINE; GROUP; IV; METAL; CARBIDE; PARTICLE; THERMOPLASTIC; SYNTHETIC; POLYMER; COVER; SECOND; COMPONENT; CONSIST; THERMOPLASTIC; SYNTHETIC; POLYMER; HOLLOW; SECTION; FORMING; FIBRE

Derwent Class: A17; A23; A94; F01; L02

International Patent Class (Main): D01F-008/14

International Patent Class (Additional): D01D-005/24; D01D-005/253; D02G-003/02; D03D-015/00

22/7,DE/4 (Item 4 from file: 351)

DIALOG(R)File 351:Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

010489671

WPI Acc No: 1995-391070/199550

Fire resistant block structure for flooring or artificial turf - comprises foamed polyolefin or polyurethane resin layer and sediment bonding of inorganic particles integrally bonded, for driving range

Patent Assignee: DIATEX KK (DIAT-N)

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 7268987	A	19951017	JP 9457370	A	19940328	199550 B
JP 2775583	B2	19980716	JP 9457370	A	19940328	199833

Priority Applications (No Type Date): JP 9457370 A 19940328

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 7268987	A		10	E04B-001/94	
JP 2775583	B2		9	E04B-001/94	Previous Publ. patent JP 7268987

Abstract (Basic): JP 7268987 A

The structure comprises:

(a) a foamed resin layer, and

(b) a sediment bonding layer integrally bonded on the foamed resin layer.

The sediment bonding layer comprises:

(i) inorganic particles having a specific gravity of at least 1.15, and

(ii) a rubber binder.

The content of the inorganic particles is 60-95 wt.% per the entire weight of the inorganic particles and the rubber binder.

USE - The fire resistant block structure is useful indoors, including a flooring, or outdoors, including artificial turf for driving range, footpath or play ground.

ADVANTAGE - The combination of the foamed resin layer and the sediment bonding layer provides superior flame retardancy, impact strength resistance, bending strength, lightweight, and compressive strength. Adjusting the thickness of the sediment bonding layer or the content of the inorganic particles freely adjusts the weight of the block structure.

Dwg.1/12

Title Terms: FIRE; RESISTANCE; BLOCK; STRUCTURE; FLOOR; ARTIFICIAL; TURF;

COMPRISE; FOAM; POLYOLEFIN; POLYURETHANE; RESIN; LAYER; SEDIMENT; BOND;
 INORGANIC; PARTICLE; INTEGRAL; BOND; DRIVE; RANGE
 Derwent Class: A17; A25; A93; Q41; Q43; Q45
 International Patent Class (Main): E04B-001/94
 International Patent Class (Additional): B29D-009/00; B29K-021-00;
 B29K-105-04; B29K-503-08; E01C-013/08; E04F-015/02

22/7,DE/5 (Item 5 from file: 351)
 DIALOG(R)File 351:Derwent WPI
 (c) 2002 Thomson Derwent. All rts. reserv.

010281967

WPI Acc No: 1995-183225/199524

Sliding member for dry and wet conditions e.g. used for chain - comprises
 synthetic resin-covered filler powder compsn.

Patent Assignee: TSUBAKIMOTO CHAIN CO (TSUC)

Inventor: TANAKA K

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 7102277	A	19950418	JP 93274802	A	19931007	199524 B
US 5635299	A	19970603	US 94316214	A	19940930	199728
JP 2783750	B2	19980806	JP 93274802	A	19931007	199836

Priority Applications (No Type Date): JP 93274802 A 19931007

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 7102277	A		11	C10M-169/04	
US 5635299	A		12	B32B-005/16	
JP 2783750	B2		12	C10M-169/04	Previous Publ. patent JP 7102277

Abstract (Basic): JP 7102277 A

A synthetic resin-covered filler powdered compsn. comprises
 synthetic resin-covered filler powder compsn. obtd. by (co)polymerising
 olefinic monomer in presence of a filler, 20-80 wt.% having sliding
 characteristics. The compsn. and if necessary, a reinforcing material
 are uniformly dispersed in a matrix comprising a water-resistant
 synthetic resin.

Also claimed is that prodn. of the sliding member comprises: (a)
 treating the filler having sliding characteristics, using a high active
 catalyst component to form a catalyst; (b) mixing if necessary, a
 different filler with the catalyst to polymerise or copolymerise the
 olefinic monomer to give the synthetic resin-covered filler powder
 compsn., 5-30 wt.%; (c) mixing the compsn. with the reinforcing
 material, 0-65 wt.% including a carbon fibre, a glass fibre, cotton
 powder, or potash titanate, and a binder, 30-70 wt.% comprising mainly
 the water-resistant synthetic resin; and (d) applying pressurisation
 moulding to the resulting mixt..

Pref. graphite, molybdenum disulphide, boron nitride, glass beads,
 silica balls, glass long fibre powder, carbon long fibre powder,
 polytetrafluoroethylene, silicon resin powder, silicon resin balls,
 polyamide resin balls, copper powder, or tin powder.

USE/ADVANTAGE - The method produces the sliding member for dry and
 wet used for a chain, a bearing, or a guide rail. The sliding member
 exerts superior sliding characteristics in a dry state and a wet state,
 and in water.

Dwg.1/6

Abstract (Equivalent): US 5635299 A

A sliding member usable in dry and moistened states or in a state

of immersion in water, comprising: 5 to 30 wt % of a synthetic resin coated filler powder composition obtained by polymerizing an olefinic monomer in the presence of a filler having a friction-reducing and/or wear-resisting property, wherein the resin coated filler powder composition comprises about 10 wt % to 90 wt % of the filler; 0 to 65 wt % of a reinforcing material; and 30 to 70% of a binder containing a waterproof synthetic resin for forming a matrix; wherein the filler having a friction reducing and/or wear-resisting property comprises a selection from inorganic solid lubricants including graphite, molybdenum disulphide, boron nitride, glass beads, silica beads, glass fiber powder, and carbon fiber powder, organic solid lubricants including polytetrafluoroethylene, silicone resin powder, silicone resin beads, and polyamide resin beads; and metal based solid lubricants including copper powder and tin powder.

Dwg.1/6

Title Terms: SLIDE; MEMBER; DRY; WET; CONDITION; CHAIN; COMPRISE; SYNTHETIC ; RESIN; COVER; FILL; POWDER; COMPOSITION

Derwent Class: A88; P73

International Patent Class (Main): B32B-005/16; C10M-169/04

International Patent Class (Additional): C10N-010-12; C10N-020-06;

C10N-040-02; C10M-107-04; C10M-107-32; C10M-125-02; C10M-125-22;

C10M-125-26; C10M-125-28; C10M-147-02; C10M-149-18; C10M-155-02;

C10M-169/04

22/7,DE/6 (Item 6 from file: 351)

DIALOG(R)File 351:Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

008625711

WPI Acc No: 1991-129741/199118

Artificial turf for tennis courts and football pitches - consists of meshed body between flat base and surface layer materials and sand sprayed into leaves of turf for good elasticity

Patent Assignee: SEKISUI CHEM IND CO LTD (SEKI)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 3069705	A	19910326	JP 89207696	A	19890809	199118 B

Priority Applications (No Type Date): JP 89207696 A 19890809

Abstract (Basic): JP 3069705 A

A meshed body is provided between a flat base material and a surface layer material formed by artificial turf and sand sprayed in the leaves of the turf. The meshed body is formed by crossing resin filaments to form regularly continuous three-dimensional space. An elastic granulate-filled reinforcing layer is formed in the space.

Pref. the elastic granulate comprises rubber granulate, or an organic matter including olefin, soft polyvinyl, styrene, or urethane. The resin comprises an olefin-based homopolymer or copolymer, or soft vinyl chloride. The base material comprises crushed stone-provided soil or asphalt.

USE/ADVANTAGE - The artificial turf is used for tennis courts or soccer grounds. The artificial turf has sufficient elasticity. The compaction of the sprayed sand is reduced. The ground continuously maintains water permeability, and buffer effect.

Dwg.0/3

Title Terms: ARTIFICIAL; TURF; TENNIS; COURT; FOOTBALL; PITCHED; CONSIST; MESH; BODY; FLAT; BASE; SURFACE; LAYER; MATERIAL; SAND; SPRAY; LEAF; TURF

; ELASTIC

Derwent Class: A86; A93; Q41

International Patent Class (Additional): E01C-013/00

22/7,DE/7 (Item 7 from file: 351)

DIALOG(R)File 351:Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

008528087

WPI Acc No: 1991-032171/199105

Synthetic resin-covered lead tube mfr. - in which mouth metals are connected to both ends of lead tube which is heated and dipped in polyethylene powder resin and then fluidised

Patent Assignee: NAKADA COATING KK (NAKA-N); YOSHIZAWA A KK (YOSH-N)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2300586	A	19901212	JP 89121733	A	19890516	199105 B

Priority Applications (No Type Date): JP 89121733 A 19890516

Abstract (Basic): JP 2300586 A

Synthetic resin-covered lead tube is obtd. by a method in which mouth metals are connected to both ends of a lead tube, and lead tube is heated and dipped in a powdered synthetic resin, e.g., polyethylene powder, fluidised in a tank in such a way as to form the synthetic resin films on the inner and outer faces of the lead tube with the mouth metals.

USE/ADVANTAGE - The synthetic resin-covered lead tube to be used in the pipeline of city water, etc., is prevented from leaching of lead into water or drinking water and also from damage by external forces and can also be easily obtd. with high productivity. (4pp Dwg.No.0/3)

Title Terms: SYNTHETIC; RESIN; COVER; LEAD; TUBE; MANUFACTURE; MOUTH; METAL ; CONNECT; END; LEAD; TUBE; HEAT; DIP; POLYETHYLENE; POWDER; RESIN; FLUIDISE

Derwent Class: A17; A88; A93; P42; P73; Q67

International Patent Class (Additional): B05D-001/18; B32B-015/08;

F16L-009/02

22/7,DE/8 (Item 8 from file: 351)

DIALOG(R)File 351:Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

007930176

WPI Acc No: 1989-195288/198927

Sand-filled artificial turf ground - comprises (non)woven fabric of polyester fibres, etc. and synthetic nylon flocked on base material on stable base, with sand on top

Patent Assignee: TORAY IND INC (TORA)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 1131705	A	19890524	JP 87289634	A	19871118	198927 B

Priority Applications (No Type Date): JP 87289634 A 19871118

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 1131705	A		3		

Abstract (Basic): JP 1131705 A

In a sand-filled artificial turf ground in which artificial turf consisting of a base material such as woven or nonwoven fabric of polyester fibres, etc., and synthetic fibre piles of nylon, etc., flocked to the base material is laid on a stable base, e.g., concrete, asphalt layer, etc., with the aid of an adhesive and sand is spread over the artificial turf, the sand e.g. natural quartz sand contg. 85% or more silicic acid and/or water absorptive synthetic resin grains of PVC, etc., having a grain size of 0.15-1.5mm is used. An elastic grain, e.g., sand grains covered with an elastic material, e.g., butadiene rubber, etc., is spread below the sand layer with an upper sand layer/the lower elastic grain thickness ratio of 100/30-100/60.

USE/ADVANTAGE - The artificial turf ground is used for sports ground, etc., It has elasticity and non-slip soft surface as well as high water drainability.

0/0

Title Terms: SAND; FILLED; ARTIFICIAL; TURF; GROUND; COMPRISE; NON; WOVEN; FABRIC; POLYESTER; FIBRE; SYNTHETIC; NYLON; FLOCK; BASE; MATERIAL; STABILISED; BASE; SAND; TOP

Derwent Class: A86; A93; L02; P27; Q41

International Patent Class (Additional): A47G-027/02; E01C-013/00

22/7,DE/9 (Item 9 from file: 351)

DIALOG(R)File 351:Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

007185332

WPI Acc No: 1987-182341/198726

Antistatic artificial turf - obt'd. by moulding compsn. contg. synthetic resin, silicic acid or silicate particles, e.g. polyethylene-oxide cpds. and organic salt electrolyte

Patent Assignee: SUMITOMO CHEM IND KK (SUMO)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 62112803	A	19870523	JP 85254362	A	19851113	198726 B

Priority Applications (No Type Date): JP 85254362 A 19851113

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 62112803	A		4		

Abstract (Basic): JP 62112803 A

An antistatic artificial turf is obt'd. by moulding a resin compsn. contg. 98.8-40 wt.% a synthetic resin, e.g., PP, PE, EVA, ABS resin, AS resin, PS, PVC, polyamide, polymethacrylate, polycarbonate, etc., 1-40 wt.% fine particles of silicic acid or silicate having a specific surface area of 10-400 m²/g, and 0.2-20 wt.% at least one selected from polyethylene oxide cpds., e.g., polyethylene glycol, etc., polypropylene oxide cpds., e.g., polypropylene glycol, etc., and organic electrolytes of salt structures, e.g., potassium acetate, sodium alkylsulphonate, etc., into a form of turf by injection, extrusion, press moulding, etc.. The resin compsn. used may contain an antioxidant, an UV rays absorber, a colourant, a filler, etc.

USE/ADVANTAGE - The antistatic artificial turf can have high antistatic property for long periods as well as high stability.

0/0

Title Terms: ANTISTATIC; ARTIFICIAL; TURF; OBTAIN; MOULD; COMPOSITION;

CONTAIN; SYNTHETIC; RESIN; SILICIC; ACID; SILICATE; PARTICLE;
POLYETHYLENE; OXIDE; COMPOUND; ORGANIC; SALT; ELECTROLYTIC
Derwent Class: A18; A23; A94; Q41
International Patent Class (Additional): C08K-003/34; C08L-071/02;
C08L-101/00; E01C-013/00

22/7,DE/10 (Item 10 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

007019394

WPI Acc No: 1987-019391/198703

Synthetic resin covered spring - includes inner coating modified olefinic
polymer thermoplastic resin coating
Patent Assignee: MITSUBISHI STEEL MFG CO LTD (MITW); NIPPON
PETROCHEMICALS CO LTD (NIPE)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 61278635	A	19861209	JP 85118708	A	19850603	198703 B

Priority Applications (No Type Date): JP 85118708 A 19850603; JP 8632740 A
19860219

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 61278635	A		11		

Abstract (Basic): JP 61278635 A

A synthetic resin-covered spring or coil spring is obtd. by
covering a coil spring of steel with a thermoplastic resin, e.g.,
polyolefin resins, polyamide resin, PVdC resin, etc., with
interposition of an olefinic polymer modified with an unsatd.
carboxylic acid or deriv., e.g., maleic acid, maleic anhydride, etc.,
or a mixture of the modified polyolefin and unmodified polyolefin
polymer, e.g., polyethylene, polypropylene, polybutene,
ethylene-alpha-olefin copolymer, EVA copolymer, ethylene-acrylate
copolymer, etc., by powder coating method, etc.

USE/ADVANTAGE - The synthetic resin-covered springs or coil springs
to be used in vehicles, etc., have good corrosion resistance and
silencing effect as well as in durability.

0/0

Title Terms: SYNTHETIC; RESIN; COVER; SPRING; INNER; COATING; MODIFIED;
OLEFINIC; POLYMER; THERMOPLASTIC; RESIN; COATING

Derwent Class: A88; Q63

International Patent Class (Additional): C08L-023/26; F16F-001/36

22/7,DE/11 (Item 11 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

004541309

WPI Acc No: 1986-044653/198607

Preventing water leakage in roofs and verandas - by applying EVA
copolymer-Inorganic powder mixt. on leaks, covering with synthetic
nonwoven fabric, applying more mixt. etc.

Patent Assignee: MICHİYOSHI F (MICH-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 60261994	A	19851225	JP 84117550	A	19840607	198607 B

Priority Applications (No Type Date): JP 84117550 A 19840607

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 60261994	A		2		

Abstract (Basic): JP 60261994 A

Method comprises applying a mixt. of ethylene vinyl acetate copolymer and inorganic powder including alumina cement to leakage portions of a roof or veranda, placing non-woven fabric made of synthetic fibre on the mixt. layer, applying the same mixt. to the fabric, allowing them to dry and applying the same mixt. to the dried layers at least once.

USE/ADVANTAGE - Provides an easy waterproof construction method to prevent water leakage in the roof or verandas of a building. (2pp Dwg.No.0/1)

Title Terms: PREVENT; WATER; LEAK; ROOF; VERANDA; APPLY; EVA; COPOLYMER; INORGANIC; POWDER; MIXTURE; LEAK; COVER; SYNTHETIC; NONWOVEN; FABRIC; APPLY; MORE; MIXTURE

Index Terms/Additional Words: POLYETHYLENE; POLYVINYL; ACETATE

Derwent Class: A93; L02; Q56

International Patent Class (Additional): C04B-024/26; C04B-028/06; F04D-011/00

22/7,DE/12 (Item 12 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

004329961

WPI Acc No: 1985-156839/198526

Decorative floor or wall material mfr. - by mixing different coloured synthetic resin pellets, covering with surfactant and extruding

Patent Assignee: LONSEAL CORP (LONS)

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 60089324	A	19850520	JP 83198004	A	19831022	198526 B
JP 88053011	B	19881020				198846

Priority Applications (No Type Date): JP 83198004 A 19831022

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 60089324	A		3		

Abstract (Basic): JP 60089324 A

At least 2 different colours synthetic resin pellets are mixed and the mixt. is covered with powder surfactant (0.2-1.0 pts.wt.) based on 100 pts. wt. of the mixt., and then, undergoes extrusion. The powder surfactant is alpha-olefin sulphonate and/or low molecular wt. polyethylene.

USE/ADVANTAGE - The decorative material can be laminated with base material such as textile, non-textile, asbestos paper, etc. and is used as floor material, wall material, etc.

0/0

Title Terms: DECORATE; FLOOR; WALL; MATERIAL; MANUFACTURE; MIX; COLOUR; SYNTHETIC; RESIN; PELLET; COVER; SURFACTANT; EXTRUDE

Derwent Class: A32

International Patent Class (Additional): B29C-047/04; B29K-027/06

22/7,DE/13 (Item 13 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

002221628

WPI Acc No: 1979-20804B/197911

Reducing loss of deoxidiser from aq. soln. - by covering with synthetic resin pellets or hollow balls

Patent Assignee: MIURA KOGYO KK (MIUR-N)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 54016004	A	19790206				197911 B

Priority Applications (No Type Date): JP 7770842 A 19770614

Abstract (Basic): JP 54016004 A

Granular materials having a bulk specific gravity <1.0 and a max. grain size <20 mm. are floated in layer(s) on the water in a chemicals-pouring tank for a boiler to suppress loss of deoxidiser.

The granular materials consist of pellets or hollow balls of synthetic resin, e.g. polyethylene, polypropylene, polystyrene, nylon, ester, aldehyde phenol, urethane or polyamide. The deoxidiser is hydrazine, hydroxylamine, hydrazine sulphate, hydrazine phosphate, hydrazine chloride or sodium sulphide.

Loss of deoxidiser is reduced to <=5%.

Title Terms: REDUCE; LOSS; DEOXIDISE; AQUEOUS; SOLUTION; COVER; SYNTHETIC; RESIN; PELLET; HOLLOW; BALL

Derwent Class: A97; E34; E36; J04

International Patent Class (Additional): C02B-001/23

22/7,DE/14 (Item 14 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

001616805

WPI Acc No: 1976-51225X/197627

Electrical appts. covered with synthetic resin - to improve moisture resistance

Patent Assignee: NISSHIN ELECTRICAL KK (NDEN)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 51058659	A	19760522				197627 B

Priority Applications (No Type Date): JP 74132560 A 19741117

Abstract (Basic): JP 51058659 A

The electric apparatus is moulded with synthetic resin to improve moisture resistance. The electric appts. is e.g. a current transformer comprising a wound coil and a conductor inserted in the coil, the coil being covered with synthetic (polyethylene) resin powder, to a thickness of 1-2 mm by an electrostatic coating method.

Title Terms: ELECTRIC; APPARATUS; COVER; SYNTHETIC; RESIN; IMPROVE; MOIST; RESISTANCE

Derwent Class: A85; L03; V02; X12; X24

International Patent Class (Additional): H01F-019/00; H01F-029/00;
H01F-040/06

22/7,DE/15 (Item 15 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

000952415

WPI Acc No: 1973-29657U/197321

Artificial ski-slope - of granules carrying artificial grass

Patent Assignee: SNOW PRODS INC (SNO -N)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 3731923	A					197321 B

Priority Applications (No Type Date): US 71137321 A 19710426

Abstract (Basic): US 3731923 A

An artificial ski slope includes multiple sheets secured edge to edge over denuded, suitably sloping ground. Each sheet includes a base of plastics material from which project outwardly flaring clusters of plastics filamentary material and plastics granules carried on the sheet between the filaments. Such a slope more nearly simulates natural conditions than prior art slopes. The granules may be irregular or cylindrical and pref. have major dimension of 1/16" to 3/16" and the length of the filaments is pref. 3/4" to 1 1/2". Remaining within the size limits prevents migration of the granules to the lower parts of the slope. Pref. the sheet is of polythene and the granules of a polyester, polyethylene, polypropylene or nylon.

Title Terms: SKI; SLOPE; GRANULE; CARRY; ARTIFICIAL; GRASS

Derwent Class: A17; A23; A86; F04; Q41

International Patent Class (Additional): E01C-013/00

22/7,DE/16 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)
(c) 2002 AMERICAN CHEMICAL SOCIETY. All rts. reserv.

97073664 CA: 97(10)73664g PATENT

Synthetic turf playing surface with resilient top-dressing

INVENTOR(AUTHOR): Haas, Frederick T., Jr.

LOCATION: USA

PATENT: United States ; US 4337283 A DATE: 820629

APPLICATION: US 186344 (800911)

PAGES: 7 pp. CODEN: USXXAM LANGUAGE: English CLASS: 428017000;

A01N-003/00

SECTION:

CA138003 Plastics Fabrication and Uses

IDENTIFIERS: synthetic turf top dressing, cork granule synthetic turf, rubber particle synthetic turf, bead plastic synthetic turf, sand top dressing synthetic turf

DESCRIPTORS:

Urethane polymers,uses and miscellaneous...

cellular, particles, top-dressings, contg. sand, for synthetic turf

Cork...

granules, top-dressing, contg. rubber particles and sand, for synthetic turf

Rubber,synthetic...

particles, top-dressings, contg. cork granules or vermiculite and sand,
for synthetic turf
Turf...
synthetic, top-dressings for, from resilient particles and sand
Sand...
top-dressings, contg. resilient particles, for synthetic turf
CAS REGISTRY NUMBERS:
9002-86-2 cellular, beads, top-dressing, contg. sand and vermiculite, for
synthetic turf
1318-00-9 top-dressings, contg. PVC foam beads or rubber particles and
sand, for synthetic turf

22/7,DE/17 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.

03825613
COVERING SOIL FOR ARTIFICIAL SEEDLING-RAISING MAT

PUB. NO.: 04-190713 [JP 4190713 A]
PUBLISHED: July 09, 1992 (19920709)
INVENTOR(s): NAKABAYASHI KAZUE
KASHIIDE HISAO
APPLICANT(s): NITTO BOSEKI CO LTD [000397] (A Japanese Company or
Corporation), JP (Japan)
APPL. NO.: 02-284601 [JP 90284601]
FILED: October 23, 1990 (19901023)
JAPIO CLASS: 11.1 (AGRICULTURE -- Agriculture & Forestry); 14.2 (ORGANIC
CHEMISTRY -- High Polymer Molecular Compounds)
JAPIO KEYWORD:R042 (CHEMISTRY -- Hydrophilic Plastics); R082 (CONSTRUCTION
-- Soil Conditioners)

ABSTRACT

PURPOSE: To provide the subject covering soil comprising a water-soluble polymer as the primary ingredient, having a light weight (1/100), eliminating hard labor on seedling-raising works, and not generating diseases owing to the non use of conventional soil in spite of the same good growth of seedlings as in conventional cases using conventional culture soil as the covering soil.

CONSTITUTION: The objective covering soil comprises as the primary ingredients at least one member selected from the group consisting of natural, semi-synthetic and synthetic water-soluble polymers (e.g. sodium alginate, sea weed powder, methyl cellulose, CMC, modified polyethylene oxide). The water-soluble polymer is preferably a polymer which reacts with ions in water to produce a gelled product.

? t s23/ti/1-15

23/TI/1 (Item 1 from file: 323)
DIALOG(R)File 323: (c) 2002 RAPRA Technology Ltd. All rts. reserv.

TITLE: PLAYING AT HOME ON FOREIGN TURF

23/TI/2 (Item 2 from file: 323)
DIALOG(R)File 323: (c) 2002 RAPRA Technology Ltd. All rts. reserv.

TITLE: SURFACE JUDGEMENT

23/TI/3 (Item 3 from file: 323)
DIALOG(R)File 323: (c) 2002 RAPRA Technology Ltd. All rts. reserv.

TITLE: WHEN THE TECHNOLOGY GOES SURFACE DEEP

23/TI/4 (Item 1 from file: 351)
DIALOG(R)File 351:(c) 2002 Thomson Derwent. All rts. reserv.

Synthetic-grass cover structure for, i.e. sport facilities, includes particulate infill consisting of homogeneous mass of granular material as polyolefin or vinyl-polymer based materials

23/TI/5 (Item 2 from file: 351)
DIALOG(R)File 351:(c) 2002 Thomson Derwent. All rts. reserv.

Plasticized random ethylene/vinyl aromatic monomer copolymer composition, used in rotomolded articles, toys, sporting goods, and appliances, comprises specified amount of plasticizer

23/TI/6 (Item 3 from file: 351)
DIALOG(R)File 351:(c) 2002 Thomson Derwent. All rts. reserv.

Filler polymer composition for use in power distribution system, e.g., wire and cable, comprises substantially random alpha-olefin/vinyl aromatic monomer interpolymers

23/TI/7 (Item 4 from file: 351)
DIALOG(R)File 351:(c) 2002 Thomson Derwent. All rts. reserv.

Artificial turf having a carpet layer of intertwined fibers of synthetic grass

23/TI/8 (Item 5 from file: 351)
DIALOG(R)File 351:(c) 2002 Thomson Derwent. All rts. reserv.

Artificial grass surface - mfd. by intertwining polyamide and polyethylene fibres into fabric on base layer, opt. through cushion layer

23/TI/9 (Item 6 from file: 351)
DIALOG(R)File 351:(c) 2002 Thomson Derwent. All rts. reserv.

Water-permeable, wear-resistant artificial turf - has net-like resin cushion layer between base material and surface layer

23/TI/10 (Item 7 from file: 351)
DIALOG(R)File 351:(c) 2002 Thomson Derwent. All rts. reserv.

Elastic material contg. elastic resin particles, binder and cork - useful as base for floor or road, e.g. for indoor or outdoor sports stadium

23/TI/11 (Item 8 from file: 351)

DIALOG(R)File 351:(c) 2002 Thomson Derwent. All rts. reserv.

Sports playing surface partic. cricket practice net - has particulate layer in shallow trench and is covered by flexible sheet and artificial turf

23/TI/12 (Item 9 from file: 351)
DIALOG(R)File 351:(c) 2002 Thomson Derwent. All rts. reserv.

Artificial lawn esp. for sports - has sand infill retained by adhesive

23/TI/13 (Item 10 from file: 351)
DIALOG(R)File 351:(c) 2002 Thomson Derwent. All rts. reserv.

Forming sports playing surface - by placing resilient sheet, e.g. expanded polyethylene, over sand filled envelopes on water permeable base

23/TI/14 (Item 1 from file: 347)
DIALOG(R)File 347:(c) 2002 JPO & JAPIO. All rts. reserv.

ARTIFICIAL LAWN SURFACED GROUND

23/TI/15 (Item 2 from file: 347)
DIALOG(R)File 347:(c) 2002 JPO & JAPIO. All rts. reserv.

TOY WEIGHT AND MANUFACTURE THEREOF

? t s23/7,de/1

23/7,DE/1 (Item 1 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
(c) 2002 RAPRA Technology Ltd. All rts. reserv.

00381361

TITLE: PLAYING AT HOME ON FOREIGN TURF

AUTHOR(S): Rothon D

SOURCE: Sports Industry; No.67, June 1989, p.8-9

ISSN: 0261-5665

JOURNAL ANNOUNCEMENT: 198910 RAPRA UPDATE: 198920

DOCUMENT TYPE: Journal Article

LANGUAGE: English

SUBFILE: (R) RAPRA

ABSTRACT: The use of a PP grass yarn in the production of artificial turf for sports pitches is described in some detail. Thiolon yarn, produced by TtC Polyolefins of the Netherlands, is reported to consist of tapes of PP extruded from heated pellets of both pigmented and colourless PP with added heat and UV stabilisers, etc. It is attached in thread form to Thiobac 1 PP support fabric. Thiolon LSR grade has been introduced primarily for use in the manufacture of artificial football pitches.

DESCRIPTORS: ARTIFICIAL GRASS; COMPANY; COMPANIES; FABRIC; FIBRE; PLASTIC; PP; PROPYLENE POLYMER; PRODUCT ANNOUNCEMENT; SPORTS APPLICATION; SPORTS SURFACE; TECHNICAL; THERMOPLASTIC; YARN; FIBER

? t s23/7,de/2-4,7-14

23/7,DE/2 (Item 2 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
(c) 2002 RAPRA Technology Ltd. All rts. reserv.

00365890

TITLE: SURFACE JUDGEMENT

AUTHOR(S): Millest J

CORPORATE SOURCE: SPORTS COUNCIL

SOURCE: Sport & Leisure; 29, No.4, Sept/Oct.1988, p.30/4

ISSN: 0144-7181

JOURNAL ANNOUNCEMENT: 198902 RAPRA UPDATE: 198826

DOCUMENT TYPE: Journal Article

LANGUAGE: English

SUBFILE: (R) RAPRA

ABSTRACT: A guide to choosing the right artificial surface for sports use is presented. The many factors which must be taken into consideration are discussed and a list of indoor surfaces complying with Sports Council Specification for Artificial Sports Surfaces is provided. These include surface such as Dunlop's Uniturf sheet PVC and Primaplay Europe PU on resin bonded rubber granular sheet. Beneath the surface use of materials including rubber granules, for shock absorbency, is also mentioned. 6 refs.

DESCRIPTORS: ARTIFICIAL GRASS; CALCULAT; COLOUR; COMPANY; COMPANIES; COST; MATERIALS SELECTION; PLASTIC; PRODUCT ANNOUNCEMENT; PU; POLYURETHANE; PVC; VINYL CHLORIDE POLYMER; RUBBER; SHEETING; SHEET; SPORTS EQUIPMENT; SPORTS SURFACE; TECHNICAL; THERMOPLASTIC

23/7,DE/3 (Item 3 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
(c) 2002 RAPRA Technology Ltd. All rts. reserv.

00349894

TITLE: WHEN THE TECHNOLOGY GOES SURFACE DEEP

SOURCE: Plastics and Rubber Weekly; No.1217, 12th Dec.1987, p.9

ISSN: 0032-1168

JOURNAL ANNOUNCEMENT: 198805 RAPRA UPDATE: 198808

DOCUMENT TYPE: Journal Article

LANGUAGE: English

SUBFILE: (R) RAPRA

ABSTRACT: A brief review is presented of recent developments in plastics sports surfaces, including those by Rapra Technology, Rushden Drake, Tivoli Kay, Netlon, Nottsport and En-tout-cas. A number of materials, such as PP, nylon, PU, PVC and rubber, have been used; their rapid rise and public prominence at the grounds of major football clubs have stimulated research into grass surfaces providing better draining and other characteristics.

DESCRIPTORS: COMPANY; COMPANIES; CRUMB RUBBER; DRAINAGE; NYLON; POLYAMIDE; PLASTIC; PP; PROPYLENE POLYMER; PU; POLYURETHANE; PVC; VINYL CHLORIDE POLYMER; RUBBER; SPORTS EQUIPMENT; SPORTS SURFACE; SYNTHETIC GRASS

23/7,DE/4 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

014303438

WPI Acc No: 2002-124141/200217

Synthetic-grass cover structure for, i.e. sport facilities, includes particulate infill consisting of homogeneous mass of granular material as polyolefin or vinyl-polymer based materials

Patent Assignee: MONDO SPA (MOND-N); STROPPIANA F (STRO-I)

Inventor: STROPPIANA F

Number of Countries: 028 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1158099	A2	20011128	EP 2001830092	A	20010213	200217 B
CA 2335716	A1	20011125	CA 2335716	A	20010213	200217
US 20010046589	A1	20011129	US 2001785778	A	20010216	200217

Priority Applications (No Type Date): IT 2000T0476 A 20000525

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1158099	A2	E	5	E01C-013/08	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI TR

CA 2335716	A1	E	E01C-013/08
------------	----	---	-------------

US 20010046589	A1	B32B-003/02
----------------	----	-------------

Abstract (Basic): EP 1158099 A2

Abstract (Basic):

NOVELTY - A synthetic-grass cover structure includes a particulate infill consisting of homogeneous mass of granular material that can be polyolefin-based materials or vinyl-polymer-based materials.

DETAILED DESCRIPTION - A synthetic-grass cover structure comprises:

(1) a sheet substrate (1) with filiform formations (2) that extend from the substrate to simulate natural grass cover; and
(2) a particulate filling material or infill (3) dispersed between the formations in such a way as to maintain the formation in an upright condition.

The particulate infill consists of homogeneous mass of granular material that can be polyolefin-based materials or vinyl-polymer-based materials.

USE - Used as alternative to natural grass for, i.e. sports facilities.

ADVANTAGE - The particulate infill of the invention is uniformly dispersed on top of the substrate, without giving rise to superimposed layers having different characteristics. The synthetic grass presents characteristics of tread and response to mechanical stress which is similar to that of a natural grass. Any falls that may occur on the synthetic grass does not give rise to undesired effects, e.g. bruises or scratches. Undesired wear of the filiform formations by the infill is avoided. The synthetic grass has excellent characteristics as regards to disposal of rain water, and the infill can also be reused and recycled.

DESCRIPTION OF DRAWING(S) - The figure shows

Sheet substrate (1)

Filiform formations (2)

Particulate filling material or infill (3)

pp; 5 DwgNo 1/1

Title Terms: SYNTHETIC; GRASS; COVER; STRUCTURE; SPORTS; FACILITY; PARTICLE
; INFILL; CONSIST; HOMOGENEOUS; MASS; GRANULE; MATERIAL; POLYOLEFIN;
VINYL; POLYMER; BASED; MATERIAL

Derwent Class: A14; A17; A35; A86; P73; Q41

International Patent Class (Main): B32B-003/02; E01C-013/08

23/7,DE/7 (Item 4 from file: 351)
 DIALOG(R)File 351:Derwent WPI
 (c) 2002 Thomson Derwent. All rts. reserv.

012552046

WPI Acc No: 1999-358153/199930

Artificial turf having a carpet layer of intertwined fibers of synthetic grass

Patent Assignee: WALTERS I D (WALT-I)

Inventor: WALTERS I D

Number of Countries: 084 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9928557	A1	19990610	WO 98GB3624	A	19981204	199930 B
AU 9913460	A	19990616	AU 9913460	A	19981204	199945
EP 961858	A1	19991208	EP 98957037	A	19981204	200002
			WO 98GB3624	A	19981204	

Priority Applications (No Type Date): GB 9725770 A 19971204

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9928557 A1 E 21 E01C-013/08

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU
 CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK
 LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ
 TM TR TT UA UG US UZ VN YU ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
 IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

EP 961858 A1 E E01C-013/08 Based on patent WO 9928557

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI
 LU MC NL PT SE

AU 9913460 A E01C-013/08 Based on patent WO 9928557

Abstract (Basic): WO 9928557 A1

Abstract (Basic):

NOVELTY - Artificial turf is formed by providing a carpet layer comprising a synthetic sheet of fibers of synthetic grass intertwined such that fibers project from one surface to form a pile, the layer being attached to a resilient elastomeric layer by a synthetic thermoplastic hot melt adhesive which is applied to the carpet layer or the backing layer at a temperature below the softening temperature of the adhesive, and the layers bonded by pressure with optional heating.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the resulting artificial turf in which the adhesion and shear strength of the adhesive is sufficient to allow the layer to restore to resting condition if the carpet and backing layers are partially dislocated by an impact force applied tangential to the carpet layer during use of the turf.

USE - As an artificial turf for ball games, particularly a golf practice mat.

ADVANTAGE - Artificial turf absorbs the striking force of a boot, bat or club, and restores to its original condition without damage.

DESCRIPTION OF DRAWING(S) - The figure shows the artificial turf
 backing layer (2)
 carpet layer (5)
 adhesive layer (7)
 pp; 21 DwgNo 2/5

Title Terms: ARTIFICIAL; TURF; CARPET; LAYER; INTERTWINE; SYNTHETIC; GRASS
Derwent Class: A93; Q41
International Patent Class (Main): E01C-013/08

23/7,DE/8 (Item 5 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

010225187

WPI Acc No: 1995-126442/199517

Artificial grass surface - mfd. by intertwining polyamide and
polyethylene fibres into fabric on base layer, opt. through cushion layer

Patent Assignee: SEKISUI CHEM IND CO LTD (SEKI)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 7048778	A	19950221	JP 93194497	A	19930805	199517 B

Priority Applications (No Type Date): JP 93194497 A 19930805

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 7048778	A	4	D05C-017/02	

Abstract (Basic): JP 7048778 A

An artificial surface flocked by intertwining polyamide fibre and
PE fibre into a fabric directly or through a cushion layer on a base
layer.

The artificial grass is formed on the foundation layer (2) and
scattering with sand (4) by a sand scattering machine. The artificial
grass (3) is formed by flocking to 25mm pile length and 1.8 kg m2 yarn
wt. by twisting split yarn (6 shown by thick line) made of 5000d
polyamide and split yarn (7, shown by fine line) made of 5000d high
density PE on the loose fabric (5) of P. The sand has particle size
less than 2mm and is scattered in amt. 30kg/m2. The ground (1) is
evaluated is accordance with JIS A 5705, and has 0.7 slide resistant
coefficient.

ADVANTAGE - Friction resistance of the surface is decreased even
when playing a game with studded footwear.

Dwg.1/3

Title Terms: ARTIFICIAL; GRASS; SURFACE; MANUFACTURE; INTERTWINE; POLYAMIDE
; POLYETHYLENE; FIBRE; FABRIC; BASE; LAYER; OPTION; THROUGH; CUSHION;
LAYER

Derwent Class: A23; A94; F05; Q41

International Patent Class (Main): D05C-017/02

International Patent Class (Additional): E01C-013/08

23/7,DE/9 (Item 6 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

008737771

WPI Acc No: 1991-241787/199133

Water-permeable, wear-resistant artificial turf - has net-like resin
cushion layer between base material and surface layer

Patent Assignee: SEKISUI CHEM IND CO LTD (SEKI)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
-----------	------	------	-------------	------	------	------

JP 3156002 A 19910704 JP 89296889 A 19891114 199133 B

Priority Applications (No Type Date): JP 89296889 A 19891114

Abstract (Basic): JP 3156002 A

In artificial turf, a cushion layer consisting of a netted material composed of crossed and bent resin filaments, e.g. of flexible PVC, etc., with regular three-dimensional spaces consisting of tops and bottoms and elastic grains, e.g. of urethane, soft vinyls, etc., packed into the three-dimensional spaces of the netted material, is interposed between a flat base material, e.g. asphalt plate, etc., and a surface layer composed of artificial turf, e.g. polypropylene piles, etc.

The single yarn dia. of the netted material is 0.2-3mm and also it has an area/ wt. per thickness of 0.3 g/cm³ and a void ratio of 95% or more. Also, the elastic grain has a size of 1-5mm and a packing density of 0.3-8 g/cm³.

USE/ADVANTAGE - The artificial turf is used for various sports and has excellent water permeability, wear resistance, elasticity, and impact absorptivity. (5pp Dwg.No.0/7)

Title Terms: WATER; PERMEABLE; WEAR; RESISTANCE; ARTIFICIAL; TURF; NET; RESIN; CUSHION; LAYER; BASE; MATERIAL; SURFACE; LAYER

Derwent Class: A18; A25; A86; Q41

International Patent Class (Additional): E01C-013/00

23/7,DE/10 (Item 7 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

007659320

WPI Acc No: 1988-293252/198842

Elastic material contg. elastic resin particles, binder and cork - useful as base for floor or road, e.g. for indoor or outdoor sports stadium
Patent Assignee: WALO BERTSCHINGER A (WALO-N).

Inventor: SCHEURER H Z

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
CH 666485	A	19880729	CH 862445	A	19860617	198842 B

Priority Applications (No Type Date): CH 862445 A 19860617

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CH 666485	A		3		

Abstract (Basic): CH 666485 A

Elastic material based on elastic synthetic particles (I) bound with an elastic synthetic resin binder (II), also contains cork particles (III). (I) consist of synthetic rubber, e.g. EPDM and/or SBR, opt. mixed with scrap rubber particles. (II) is a polyurethane resin. The material may also contain gravel and/or sand; and/or the surface may be reinforced, e.g. with a natural and/or synthetic fibre or metal mesh.

USE/ADVANTAGE - The material is claimed for use as an elastic base for a floor and/or roadway, esp. for an outdoor or indoor sports stadium, e.g. a gymnasium, football stadium, play area or multipurpose area. It is suitable base for artificial grass for football pitches and other sports and play areas. It is free from materials harmful to the environment and has the reqd. elasticity, durability, wear and load bearing capacity. The insulating properties and reduced weight imparted

by (III) make it suitable for numerous other applications, e.g. in the building sector and industry.

0/0

Title Terms: ELASTIC; MATERIAL; CONTAIN; ELASTIC; RESIN; PARTICLE; BIND; CORK; USEFUL; BASE; FLOOR; ROAD; INDOOR; OUTDOOR; SPORTS; STADIUM

Index Terms/Additional Words: EPDM; SBR; POLYURETHANE; POLYETHYLENE; POLYPROPYLENE; POLYDIENE; MONOMER; POLYSTYRENE; POLYBUTADIENE; RUBBER

Derwent Class: A93; L02; Q41

International Patent Class (Additional): C08J-005/10; E01C-005/20; E01C-007/00; E01C-013/00

23/7,DE/11 (Item 8 from file: 351)

DIALOG(R)File 351:Derwent WPI

(c) 2002 Thomson Derwent. All rts. reserv.

004592186

WPI Acc No: 1986-095530/198615

Sports playing surface partic. cricket practice net - has particulate layer in shallow trench and is covered by flexible sheet and artificial turf

Patent Assignee: NOTTS COUNTY COUNCI (NOTT-N)

Inventor: DURY P L K

Number of Countries: 012 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 177155	A	19860409				198615 B

Priority Applications (No Type Date): GB 8421660 A 19840825

Cited Patents: A3...8731; AT 56808; DE 1658476; FR 2315570; GB 1539475;

No-SR.Pub; US 1699660; US 2515847; US 3682476

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 177155	A	E	7		

Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE

Abstract (Basic): EP 177155 A

Surface comprises a layer of fine particulate material on and surrounded by water-impermeable material and covered by a flexible sheet resting on the layer. The flexible sheet is pref. water-impermeable and a sheet of artificioal turf may be laid on it.

The layer is pref. located in a shallow concrete trench, or in a shallow trench excavated in open ground and lined with dense water-impermeable polyethylene foam forming an open shallow box with the sides thicker than the base. The floor of trench or box is pref. roughened to prevent undue movement of the particulate material, and the flexible sheet is secured to the ground around the box to enclose the layer completely and water-tightly. The layer is e.g. of sand 25-50 mm thick and the sheet is of bonded rubber particles or bonded fibre felt. Turf is e.g. of polypropylene.

USE/ADVANTAGE - Partic. for an indoor cricket practice net, providing desired constant bounce. (7pp Dwg.No.0/2)

Title Terms: SPORTS; PLAY; SURFACE; CRICKET; PRACTICE; NET; PARTICLE; LAYER ; SHALLOW; TRENCH; COVER; FLEXIBLE; SHEET; ARTIFICIAL; TURF

Index Terms/Additional Words: RUBBER; POLYPROPYLENE

Derwent Class: A17; A86; P36

International Patent Class (Additional): A63C-019/00

23/7,DE/12 (Item 9 from file: 351)

DIALOG(R) File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

004404695

WPI Acc No: 1985-231573/198538

Artificial lawn esp. for sports - has sand infill retained by adhesive

Patent Assignee: ADOLFF J F AG (ADOL-N)

Inventor: FRIEDRICH H J

Number of Countries: 016 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 154841	A	19850918	EP 85101743	A	19850216	198538 B
DE 3409361	A	19850919	DE 3409361	A	19840314	198539
GB 2155327	A	19850925	GB 856583	A	19850314	198539
AU 8539248	A	19850919				198545
GB 2155327	B	19851224				198601
CN 8502143	A	19870110				198806
US 4735825	A	19880405	US 8773857	A	19870715	198816
CA 1246109	A	19881206				198902
SU 1433422	A	19881023	SU 3872751	A	19850313	198917
EP 154841	B	19891011				198941
DE 3573627	G	19891116				198947

Priority Applications (No Type Date): DE 3409361 A 19840314

Cited Patents: A3...8652; EP 64140; EP 65622; No-SR.Pub; US 4396653

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 154841 A G 14

Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE

EP 154841 B G

Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE

Abstract (Basic): EP 154841 A

An artificial lawn, esp. for sports grounds, has a filling of sand or other granular material between the threads of the nap. This filling is held in place by an adhesive. In particular at least at the surface of the infill the adhesive is of a granular material, pref. sprayed into position. Adhesives may be water-soluble, esp. of cellulose-ether or casein, or may be water-insoluble, esp. of PVC powder PET powder, fibres, synthetic resin dispersions in water or in a solvent.

USE/ADVANTAGE - As a lawn esp. for a sports ground. Improved properties in particular in respect of the weather.

0/1

Abstract (Equivalent): EP 154841 B

Artificial grass, in particular for games and sports sites, between whose pile threads a filling consisting of pourable material, in particular sand, is provided, such that the free ends of the pile threads project beyond the filling characterised in that the filling is secured in relation to the pile threads by means of a water-insoluble particulate bonding agent mixed with the filling material and which is activated by heating. (6pp)

Abstract (Equivalent): GB 2155327 B

An artificial turf, in particular for sports and playing areas, having a filling of a subdivided bulk material, in particular sand, provided between its pile threads so that the free ends of said pile threads project above said filling, characterised in that the filling is fixed in relation to the pile threads by a bonding agent.

Abstract (Equivalent): US 4735825 A

Artificial grass is produced by mixing free-flowing bulk material with bonding agent, distributing the mixt. between the pile threads of

a base mat as a filling with the threads projecting above the filling, and curing the bonding agent so that it secures the material to the threads and the prod. can be rolled for transporation and then unrolled without loss of the material.

The bulk material is pref. sand, and the bonding agent may be readily subsequently removable, e.g. cellulose ether or casein derivs., or may be permanent, eg. polyethylene powder with a particulate size of up to 600 micro-m.

ADVANTAGE - Allows complete prepn. to be carried out at the factory, the prod. only requiring to be unrolled and laid. (4pp)5
 Title Terms: ARTIFICIAL; LAWN; SPORTS; SAND; INFILL; RETAIN; ADHESIVE
 Derwent Class: A93; P21; P27; P36; P42; Q41
 International Patent Class (Additional): A41G-001/00; A47G-027/00;
 A63C-009/04; A63C-019/04; B05D-001/36; D04B-021/02; D04H-011/00;
 E01C-005/20; E01C-013/00

23/7,DE/13 (Item 10 from file: 351)
 DIALOG(R)File 351:Derwent WPI
 (c) 2002 Thomson Derwent. All rts. reserv.

003813320

WPI Acc No: 1983-809565/198345

Forming sports playing surface - by placing resilient sheet, e.g. expanded polyethylene, over sand filled envelopes on water permeable base
 Patent Assignee: NOTTS COUNTY COUNCI (NOTT-N)
 Inventor: DURY P L K

Number of Countries: 016 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 93008	A	19831102	EP 83302330	A	19830425	198345 B
AU 8313928	A	19831103				198350
ZA 8302846	A	19840323	ZA 832846	A	19830402	198429
ES 8403999	A	19840701				198433
US 4501420	A	19850226	US 83488626	A	19830425	198511
EP 93008	B	19850911				198537
DE 3360770	G	19851017				198543
CA 1202991	A	19860408				198621

Priority Applications (No Type Date): GB 8220789 A 19820717; GB 8212124 A 19820427

Cited Patents: BE 873556; DE 2710578; EP 5238; EP 65622; FR 2105231; FR 2112547; FR 2318285; FR 2461063; GB 2000726; NL 6513549; US 3418897; US 4007307; US 4044179

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 93008	A	E	12		
Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE					
EP 93008	B	E			
Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE					

Abstract (Basic): EP 93008 A

Surface is formed by laying on a drained (3) or water-permeable surface (1) a flexible water-permeable envelope (4) contg. unbonded sand (5), and placing a resilient sheet (9) on the envelope. The envelopes pref. measure 2 x 7 m to 4 x 20 m and are butted (6) together to form a continuous layer.

The sand is pref. mixed with gravel and clay and forms a layer 12-75 mm thick. The sheet is pref. of bonded rubber particles or dense expanded polyethylene, and a second sheet of different stiffness and/or

resilience may be placed on the first, the upper sheet carrying a playing surface (10) of synthetic turf or carpet.

The arrangement allows the required bounce to be produced to simulate a natural surface bounce, e.g. for soccer, cricket or tennis.

0/3

Title Terms: FORMING; SPORTS; PLAY; SURFACE; PLACE; RESILIENT; SHEET;
EXPAND; POLYETHYLENE; SAND; FILLED; ENVELOPE; WATER; PERMEABLE; BASE
Index Terms/Additional Words: BOND; RUBBER
Derwent Class: A86; Q41
International Patent Class (Additional): A63C-019/00; E01C-003/00;
E01C-013/00

23/7, DE/14 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.

03462804

ARTIFICIAL LAWN SURFACED GROUND

PUB. NO.: 03-125704 [JP 3125704 A]
PUBLISHED: May 29, 1991 (19910529)
INVENTOR(s): TAMAOKI HISAHIRO
APPLICANT(s): SEKISUI CHEM CO LTD [000217] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 01-263384 [JP 89263384]
FILED: October 09, 1989 (19891009)
JAPIO CLASS: 27.9 (CONSTRUCTION -- Other); 30.2 (MISCELLANEOUS GOODS -- Sports & Recreation)

ABSTRACT

PURPOSE: To obtain the natural sense of traveling on an artificial lawn by filling organic particles having no rubber-like elasticity with a specific particle size into grass leaves artificially planted on the foundation cloth, and designing so that sand spread on them is not solidified by consolidation.

CONSTITUTION: Organic particles 6 of olefin system resin, etc., having no rubber-like elasticity, with less than 2mm of a particle size are filled into roots of grass leaves artificially planted on the foundation cloth 2. Sand 4 is spread on them to form a surface layer member 5a. According to the constitution, such an artificial lawn can be obtained as having no elasticity, providing a natural sense of traveling and unhardening property even if it is used for a long time.